

IN THE CLAIMS

Claims 1-11 (Cancelled):

Claim 12 (Withdrawn, Original): A process for the fermentative preparation of an L-amino acid, comprising:

- a) fermenting coryneform bacteria which produce the L-amino acid and in which at least the *rpsL* gene or nucleotide sequences which code for it are enhanced,
- b) concentrating the L-amino acid in the medium or in the cells of the bacteria, and
- c) isolating the L-amino acid.

Claim 13 (Withdrawn, Original): A process as claimed in claim 12, in which at least the *rpsL* gene or nucleotide sequences which code for it are over-expressed.

Claim 14 (Withdrawn, Original): A process as claimed in claim 12, wherein the L-amino acid is L-lysine.

Claim 15 (Withdrawn, Original): A process as claimed in claim 12, wherein bacteria in which further genes of the biosynthesis pathway of the desired L-amino acid are additionally enhanced are employed.

Claim 16 (Withdrawn, Original): A process as claimed in claim 12, wherein bacteria in which the metabolic pathways which reduce the formation of the L-amino acid are at least partly eliminated are employed.

Claim 17 (Withdrawn, Original): A process as claimed in claim 12, wherein the bacteria are transformed with a plasmid vector, wherein the plasmid vector carries the nucleotide sequence which codes for the *rpsL* gene.

Claim 18 (Withdrawn, Original): A process as claimed in claim 12, wherein the expression of the polynucleotide(s) which code(s) for the *rpsL* gene is enhanced.

Claim 19 (Withdrawn, Original): A process as claimed in claim 12, wherein the expression of the polynucleotide(s) which code(s) for the *rpsL* gene is over-expressed.

Claim 20 (Withdrawn, Original): A process as claimed in claim 12, wherein the regulatory/catalytic properties of the polypeptide for which the polynucleotide *rpsL* codes are increased.

Claim 21 (Withdrawn, Original): A process as claimed in claim 12, wherein in the bacteria one or more of the genes selected from the group consisting of

- the *dapA* gene which codes for dihydrodipicolinate synthase,
- the *gap* gene which codes for glyceraldehyde 3-phosphate dehydrogenase,
- the *tpi* gene which codes for triose phosphate isomerase,
- the *pgk* gene which codes for 3-phosphoglycerate kinase,
- the *zwf* gene which codes for glucose 6-phosphate dehydrogenase,
- the *pyc* gene which codes for pyruvate carboxylase,
- the *mgo* gene which codes for malate-quinone oxidoreductase,
- the *lysC* gene which codes for a feed-back resistant aspartate kinase,
- the *lysE* gene which codes for the lysine export protein,

the *zwa1* gene which codes for the Zwa1 protein, and
the *rpoB* gene which codes for RNA polymerase B,
is or are enhanced or over-expressed.

Claim 22 (Withdrawn, Original): A process as claimed in claim 12, wherein in the bacteria one or more of the genes selected from the group consisting of

the *pck* gene which codes for phosphoenol pyruvate carboxykinase,
the *pgi* gene which codes for glucose 6-phosphate isomerase,
the *poxB* gene which codes for pyruvate oxidase,
the *zwa2* gene which codes for the Zwa2 protein
is or are attenuated.

Claim 23 (Withdrawn, Original): A process as claimed in claim 12, wherein the bacteria are *Corynebacterium glutamicum*.

Claim 24 (Cancelled):

Claim 25 (Withdrawn, Original): A process for discovering RNA, cDNA and DNA in order to isolate nucleic acids or polynucleotides or genes which code for the ribosomal protein S12 or have a high similarity with the sequence of the *rpsL* gene, which comprises employing the polynucleotide comprising the polynucleotide sequences as claimed in claim 1 as a hybridization probe.

Claim 26 (Withdrawn, Original): A process as claimed in claim 25, which is conducted on an array, micro array, or DNA chip.

Claim 27 (Withdrawn, Original): A process for identifying a nucleic acid which codes the ribosomal protein S12 or a high similarity with the sequence of the *rpsL* gene, comprising:

contacting a sample with the polynucleotide sequence as claimed in claim 1 under hybridization conditions such that the polynucleotide sequence as claimed in claim 1 hybridizes with said nucleic acid when said nucleic acid is present in the sample.

Claim 28 (Withdrawn, Original): The process of claim 27, wherein said nucleic acid is present in the sample.

Claim 29 (Withdrawn, Original): The process of claim 28, further comprising isolating said nucleic acid.

Claim 30 (Withdrawn, Original): The process of claim 27, wherein said nucleic acid is not present in the sample.

Claims 31-40 (Cancelled):

Claim 41 (New): An isolated polynucleotide comprising a polynucleotide sequence selected from the group consisting of:

- a) a polynucleotide which is at least 95% identical to a polynucleotide which encodes SEQ ID NO: 2 and that has an activity of the ribosomal S12 protein, and
- b) a polynucleotide which encodes a polypeptide which is at least 95% identical to SEQ ID NO: 2 and that has an activity of the ribosomal S12 protein.

Claim 42 (New): The polynucleotide of Claim 41, which is at least 95% identical to a polynucleotide which encodes SEQ ID NO: 2 and that has an activity of the ribosomal S12 protein.

Claim 43 (New): The polynucleotide of Claim 41, which is at least 97% identical to a polynucleotide which encodes SEQ ID NO: 2.

Claim 44 (New): The polynucleotide of Claim 41, which is at least 95% identical to SEQ ID NO: 1.

Claim 45 (New): The polynucleotide of Claim 41, which is at least 97% identical to SEQ ID NO: 1.

Claim 46 (New): An isolated polynucleotide which hybridizes to SEQ ID NO: 1 under stringent conditions and which encodes a polypeptide that has an activity of the ribosomal S12 protein,

wherein stringent conditions comprise hybridization in 5x SSC and washing in 2x SSC at a temperature ranging from 50°C to 68°C.

Claim 47 (New): The polynucleotide of Claim 46, which comprises SEQ ID NO: 1.

Claim 48 (New): The polynucleotide of Claim 41, which is RNA.

Claim 49 (New): The polynucleotide of Claim 41, which comprises SEQ ID NO: 3, or a fragment of SEQ ID NO: 3 comprising residue 43, which encodes a polypeptide having an activity of the ribosomal S12 protein.

Claim 50 (New): The polynucleotide of Claim 41, which comprises SEQ ID NO: 3.

Claim 51 (New): The polynucleotide of Claim 41, which encodes a polypeptide which is at least 95% identical to SEQ ID NO: 2.

Claim 52 (New): The polynucleotide of Claim 41, which encodes a polypeptide which is at least 97% identical to SEQ ID NO: 2.

Claim 53 (New): The polynucleotide of Claim 41, which encodes a polypeptide which is at least 99% identical to SEQ ID NO: 2.

Claim 54 (New): The polynucleotide of Claim 41, which encodes the polypeptide of SEQ ID NO: 2.

Claim 55 (New): The isolated polynucleotide of Claim 41, which encodes a polypeptide at least 95% identical to SEQ ID NO: 2 and that has at least one amino acid

substitution between positions 38-48 of SEQ ID NO: 2, wherein expression of said polypeptide in a coryneform bacterium increases the production of lysine compared to expression of the polypeptide of SEQ ID NO: 2.

Claim 56 (New): The isolated polynucleotide of Claim 41, which encodes the polypeptide of SEQ ID NO: 2, except that the lysine at position 43 of SEQ ID NO: 2 has been substituted by a proteinogenic amino acid other than lysine.

Claim 57 (New): The isolated polynucleotide of Claim 41, which encodes the polypeptide of SEQ ID NO: 2, except that the lysine at position 43 of SEQ ID NO: 2 has been substituted by histidine.

Claim 58 (New): The isolated polynucleotide of Claim 41, which encodes the polypeptide of SEQ ID NO: 2, except that the lysine at position 43 of SEQ ID NO: 2 has been substituted by arginine.

Claim 59 (New): A vector comprising the isolated polynucleotide of Claim 41.

Claim 60 (New): A vector comprising the isolated polynucleotide of Claim 46.

Claim 61 (New): A vector comprising the isolated polynucleotide of Claim 55.

Claim 62 (New): A host cell comprising the isolated polynucleotide of Claim 41.

Claim 63 (New): The host cell of Claim 62, wherein said polynucleotide is present in multiple copies.

Claim 64 (New): The host cell of Claim 62, further comprising a promoter, ribosome binding site, expression cassette or regulation region upstream from said polynucleotide.

Claim 65 (New): The host cell of Claim 62, which is a coryneform bacterium.

Claim 66 (New): The host cell of Claim 62, which is *Corynebacterium glutamicum*.

Claim 67 (New): A host cell comprising the isolated polynucleotide of Claim 46.

Claim 68 (New): The host cell of Claim 67, wherein said polynucleotide is present in multiple copies.

Claim 69 (New): The host cell of Claim 67, further comprising a promoter, ribosome binding site, expression cassette or regulation region upstream from said polynucleotide.

Claim 70 (New): The host cell of Claim 67, which is a coryneform bacterium.

Claim 71 (New): The host cell of Claim 67, which is *Corynebacterium glutamicum*.

Claim 72 (New): A host cell comprising the isolated polynucleotide of Claim 55.

Claim 73 (New): The host cell of Claim 72, wherein said polynucleotide is present in multiple copies.

Claim 74 (New): The host cell of Claim 72, further comprising a promoter, ribosome binding site, expression cassette or regulation region upstream from said polynucleotide.

Claim 75 (New): The host cell of Claim 72, which is a coryneform bacterium.

Claim 76 (New): The host cell of Claim 72, which is *Corynebacterium glutamicum*.

Claim 77 (New): An isolated coryneform bacterium comprising the polynucleotide of Claim 56.

Claim 78 (New): An isolated coryneform bacterium comprising the polynucleotide of Claim 57.

Claim 79 (New): An isolated coryneform bacterium comprising the polynucleotide of Claim 58.

Claim 80 (New): An isolated coryneform bacterium comprising the polynucleotide of Claim 50.

Claim 81 (New): *Corynebacterium glutamicum* strain DM1545 deposited as DSM 13992 at the Deutsche Sammlung für Mikroorganismen und Zellkulturen (DSMZ, German Collection of Microorganisms and Cell Cultures, Braunschweig, Germany).

Claim 82 (New): A process for preparing an amino acid comprising:

culturing the host cell of Claim 62 in a medium for a time and under conditions suitable for the fermentive production of said amino acid, and recovering or isolating said amino acid.

Claim 83 (New): The process of Claim 82, wherein said amino acid is L-lysine.

Claim 84 (New): A process for preparing an amino acid comprising:
culturing the host cell of Claim 67 in a medium for a time and under conditions suitable for the fermentive production of said amino acid, and recovering or isolating said amino acid.

Claim 85 (New): The process of Claim 84, wherein said amino acid is L-lysine.

Claim 86 (New): A process for preparing an amino acid comprising:
culturing the host cell of Claim 72 in a medium for a time and under conditions suitable for the fermentive production of said amino acid, and recovering or isolating said amino acid.

Claim 87 (New): The process of Claim 86, wherein said amino acid is L-lysine.

Claim 88 (New): An isolated polynucleotide comprising at least 15 consecutive nucleotides SEQ ID NO: 1, or the full complement thereof.

Claim 89 (New): The isolated polynucleotide of Claim 88 consisting of at least 15 consecutive nucleotides of nucleotides 1-499 or 884-1775 of SEQ ID NO: 1, or the full complement thereof.

Claim 90 (New): The isolated polynucleotide of Claim 88 comprising at least 20 consecutive nucleotides of SEQ ID NO: 1, or the full complement thereof.

Claim 91 (New): The isolated polynucleotide of Claim 88 comprising at least 30 consecutive nucleotides of SEQ ID NO: 1, or the full complement thereof.